

Serial No. 10/051,510

Amendments to the claims:

1. (currently amended) A vertical cavity surface emitting laser, comprising:
an optical cavity adjacent a first mirror;
an emitting mirror adjacent said optical cavity;
a mode defining aperture for controlling transverse modes; and
an absorbing layer integrated within the emitting mirror,
wherein said absorbing layer is laterally located within at least a portion of said mode defining aperture, and
wherein said absorbing layer is located at or near a null in the standing optical wave pattern in closest proximity to an emission facet so as to minimally interact with transmission light in the optical cavity, and further so as to strongly interact with external light reflected back into the cavity.
2. (currently amended) ~~The vertical cavity surface emitting laser of claim 1~~
A vertical cavity surface emitting laser, comprising:
an optical cavity adjacent a first mirror;
an emitting mirror adjacent said optical cavity;
a mode defining aperture for controlling transverse modes; and
an absorbing layer integrated within the emitting mirror,
wherein said absorbing layer is laterally located within at least a portion of said mode defining aperture, and
wherein said absorbing layer comprises a layer of conductive material.
3. (original) The vertical cavity surface emitting laser of claim 2 wherein said conductive material comprises titanium.
4. (original) The vertical cavity surface emitting laser of claim 1 wherein said absorbing layer comprises a layer of semiconductor material.

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5. (original) The vertical cavity surface emitting laser of claim 4 wherein said semiconductor material is doped p-type.
6. (original) The vertical cavity surface emitting laser of claim 4 wherein the semiconductor material is a narrow bandgap material, and wherein an absorption edge of said semiconductor material is at a longer wavelength than emission wavelength of said vertical cavity surface emitting laser.
7. (original) The vertical cavity surface emitting laser of claim 1 wherein said emitting mirror comprises a DBR having a plurality of mirror periods.
8. (canceled).
9. (original) The vertical cavity surface emitting laser of claim 1 wherein said upper ohmic contact comprises an intracavity contact coupled to the optical cavity.
10. (original) The vertical cavity surface emitting laser of claim 9 wherein said emitting mirror comprises a dielectric DBR having a plurality of mirror periods.
11. (original) The vertical cavity surface emitting laser of claim 10 wherein optical thickness of mirror period containing said absorbing layer does not equal optical thickness of remaining mirror periods.
12. (canceled)
13. (currently amended) The vertical cavity surface emitting laser of claim ~~12~~ 11 wherein said absorbing layer comprises a layer of conductive material.
14. (original) The vertical cavity surface emitting laser of claim 13 wherein said conductive material comprises titanium.

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15. (original) The vertical cavity surface emitting laser of claim 1 wherein said emitting mirror comprises a hybrid mirror having a semiconductor portion and a dielectric portion.

16. (original) The vertical cavity surface emitting laser of claim 15 wherein said absorbing layer is integrated within said dielectric portion.

17. (canceled).

18. (currently amended) The vertical cavity surface emitting laser of claim ~~17~~ 16 wherein said absorbing layer comprises a layer of conductive material.

19. (currently amended) The vertical cavity surface emitting laser of claim ~~17~~ 16 wherein said conductive material comprises titanium.

20. (currently amended) A vertical cavity surface emitting laser, comprising:
an optical cavity adjacent a first mirror;
a semiconductor emitting mirror adjacent said optical cavity; and
an absorbing layer integrated within the emitting mirror,
wherein said absorbing layer is located at or near a null in the standing optical wave pattern in closest proximity to an emission facet so as to minimally interact with transmission light in the optical cavity, and further so as to strongly interact with external light reflected back into the cavity.

21. (original) The vertical cavity surface emitting laser of claim 20 wherein said absorbing layer comprises a layer of semiconductor material.

22. (original) The vertical cavity surface emitting laser of claim 21 wherein said semiconductor material is doped p-type.

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23. (original) The vertical cavity surface emitting laser of claim 21 wherein the semiconductor material is a narrow bandgap material, and wherein an absorption edge of said semiconductor material is at a longer wavelength than emission wavelength of said vertical cavity surface emitting laser.

24. (canceled)

25. (canceled.)